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IN THE

# Supreme Court of the United States

October Term, 1938

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No. 166

THE TOLEDO PRESSED STEEL COMPANY,
*Petitioner,*

*vs.*

STANDARD PARTS, INC.,
*Respondent.*

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No. 167

THE TOLEDO PRESSED STEEL COMPANY,
*Petitioner,*

*vs.*

HUEBNER SUPPLY COMPANY,
*Respondent.*

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No. 603

MONTGOMERY WARD & COMPANY,
*Petitioner,*

*vs.*

THE TOLEDO PRESSED STEEL COMPANY,
*Respondent.*

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## BRIEF FOR THE TOLEDO PRESSED STEEL CO.

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*Solicitor for The Toledo Pressed Steel Company.*

SAMUEL E. DARBY, JR.,
*Of Counsel.*

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## BRIEF FOR THE TOLEDO PRESSED STEEL CO.

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### Nature of the Cases

These are patent infringement suits brought by The Toledo Pressed Steel Company as owner of Withrow and Close patent No. 1,732,708 for a Burner for use in outdoor warning signals, such as construction torches and truck flares.

Defendants-respondents in cases 166 and 167 are auto-accessory dealers in Toledo, Ohio, which sell truck flares manufactured respectively by The Bolser Corporation, of Des Moines, Iowa (known as the Bolser flare), and by Kari-Keen Manufacturing Company, of Sioux City, Iowa (known as the Kari-Keen flare), and Montgomery Ward & Company, petitioner-defendant in case No. 603, sells truck flares manufactured by Anthes Force Oiler Company, of Fort Madison, Iowa (known as the Anthes flare).

In each case the manufacturer of the flare charged to infringe has assumed and is conducting the defense.

## Opinions of the Courts Below

The late Judge Hahn, in the District Court for the Northern District of Ohio, Western Division, held the patent valid, that the Bolser flare infringed claims 2, 5, 11, 12 and 13, and that the Kari-Keen flare infringed claims 1, 2, 5, 6, 7, 11, 12 and 13. The cases were heard together and a single opinion rendered. The opinion is not reported, but is found at pages 21 to 29 of the Ohio record. The Court of Appeals for the Sixth Circuit reversed the decrees of the District Court on the ground of invalidity for want of invention.[1]

In case No. 603, Judge Moscowitz, in the District Court for the Eastern District of New York, held the patent invalid and dismissed the bill, relying on the decision of the Sixth Circuit Court of Appeals.[2]

The Court of Appeals for the Second Circuit reversed the decree and held the patent valid and claims 2, 5, 11 and 12 infringed by the Anthes flare.[3]

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1 93 Fed (2) 336; Ohio R. 284.
2 37 P. Q. 318; N. Y. R. 424.
3 99 Fed. (2) 806; N. Y. R. 447.

## Jurisdiction

Cases 166 and 167 are here on writ of *certiorari* granted by this court on November 21, 1938, and case No. 603 is here on writ of *certiorari* granted by this court on February 6, 1939, jurisdiction in all these cases having been invoked under Section 347a, U. S. Code, Title 28.

## Assignment of Errors in Cases 166 and 167

1. The Court of Appeals for the Sixth Circuit erred in reversing and in not affirming the decrees of the District Court finding the patent valid and infringed.

2. The said court erred in substituting its own intuition or divination of what was easy and apparent for the actual experience of those skilled in the art at and prior to the date of invention.

3. The said court erred in disregarding the presumption of validity arising from the granting of the patent and in placing on the petitioner the burden of affirmatively establishing validity instead of requiring respondents to establish invalidity.

4. The said court erred in holding that any mechanic skilled in the art could have produced the burner of the patent in suit by combining with the open-flame torch of the prior art a flame guard taken from the indoor burner art, such, for example, as a guard for a pilot light on a kitchen gas stove.

## Statement of the Case

The patent is directed to the provision of a burner for signal torches[4] which will remain lighted in heavy

[4] Commonly referred to as "construction torches" when used by contractors, and as "flares" when used as warning signals for parked trucks or busses.

winds and rains. Since time out of mind torches of this general type have been in use for guarding obstructions and excavations on public highways. Prior to the invention of the patent in suit these consisted of a metal container for oil having a wick opening in the top and a cylindrical cotton wick extending from the oil a substantial distance outside the container. The flickering, wavering luminescent flame from these torches made an excellent warning signal, but they were unreliable because the flame would be extinguished by heavy winds and rains, especially in cold weather.

In 1925 The Toledo Pressed Steel Company, owner of the patent in suit, began the manufacture of these open-flame torches with sheet metal bodies,[5] at first in the form shown in McCloskey patent 1,610,301, known as the McCloskey torch,[6] and beginning in 1926 in the form shown in Close patent 1,613,819, known as the "Toledo" torch.[7] It found that these torches would not stay lighted in bad weather, with the result that there would be no warning signal when one was most needed. Many complaints were received from users of these torches,[8] and in an effort to overcome this fault the manufacturer recommended that the wick be extended 1½ inches or more.[9] Still complaints came in and in the spring of 1928 the inventors, Withrow and Close, president and vice-president respectively of The Toledo Pressed Steel Company, began an intensive study of the problem in an effort to produce a torch which would remain lighted in bad weather. In the course of their experiments, which con-

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[5] Previously they had been of cast iron.

[6] Ohio R. 279.

[7] Ohio R. 281.

[8] See Ohio R. 53 to 56, for excerpts from a number of them.

[9] To each torch sold was attached a tag reading: "A normal length of exposed wick is about 1½ inches. Extend the wick further for heavy weather conditions." (Ohio R. 167.)

tinued until late in the fall, they built and tried out a large number of burners, testing each in turn against the best previous experimental burner, and finally developed the burner of the patent in suit.[10]

The patent was applied for on December 26, 1928, and the patented torch first placed on the market late in January of 1929, and promptly superseded the older type torch. The patented burner was made interchangeable with the old type "Toledo" burner and a large proportion of owners purchased the patented burners for substitution in their old "Toledo" torches.

Not only did the new burner remain lighted under high winds and heavy rains; it also reduced fuel costs more than 50% and practically eliminated wick losses, which were from ¾ inch to 1¼ inches each night with the old type burner. Because of these savings the name "Economy" burner was given to the patented device.

After referring to these savings and the fact that the burner would stay lighted in stormy weather, Judge Manton, in the opinion of the Second Circuit Court of Appeals, stated (N. Y. R. 449):

> "These advantages are obtained by substituting for the burner of the old open-flame torch, which was a wick-tube and wick protruding from the container for oil, a burner in which the end of the wick-tube and wick are enclosed in a metal cap provided with suitable air inlets and flame outlets. The cap is supported on a flange which contacts the wick-tube and transmits heat to the wick-tube and wick to maintain the oil above the flash point and provide under all weather conditions a suitable supply of hydrocarbon vapor which escapes from the flame openings in the metal cap and burns outside the cap. Regardless of the effect of wind

[10] The principal steps in these experiments are illustrated by the cuts on pages 168 to 180 of the Ohio Record and pages 270 to 288 of the New York Record.

> and rain on the flame outside the burner, the source of the flame inside the burner is protected and continues to supply the hydrocarbon vapor necessary to feed the flame which is the warning signal."

Within a few months from the appearance of the "Economy" burner on the market McCloskey Torch Company, which for several years had been selling the McCloskey open-flame torch in competition with the "Toledo" open-flame torch, brought out a burner similar in construction to the patented "Economy" burner, which it called the "Cyclone" burner, and advertised it as a "wonderful improvement."[11] Some time later R. E. Dietz Company, of New York, which was manufacturing an open-flame torch similar to the Toledo when the "Economy" burner was placed on the market, came out with a protected type torch which was charged to infringe the patent in suit and was subsequently licensed thereunder. Dietz gave to this new burner the name "Stormproof," and in its advertising stated (Ohio R. 203):[12]

> "Dietz No. 32 Stormproof Burner has been put to the most rigorous tests without a single failure. It burns in severest wind and rain and is the MOST DEPENDABLE of all types."

In 1933 Anthes Force Oiler Company took a license under the patent in suit at a royalty of 3c per torch or burner.[13] In 1934 similar licenses were taken by K-D Lamp Company, of Cincinnati, and The Doray Lamp Company, of Chicago, which licenses are still in force. Shank

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11 For circulars of the open type and "Cyclone" McCloskey burners see Ohio R. pp. 204-205; N. Y. R. pp. 299-305.

12 For circulars of the Dietz open type and "Stormproof" burners see Ohio R. pp. 199 and 203.

13 This is the company which manufactures the flare involved in the New York case. The flare made under the license is illustrated at page 253 of the New York record. It had air inlet openings in the side of the cap. Later Anthes raised the cap supporting flange slightly above the body of the flare, shifted the air inlet openings from the cap to the supporting flange and refused to pay further royalties. The license was thereupon cancelled and the New York suit resulted.

lin Manufacturing Company, of Chicago, and Embury Manufacturing Company, of Warsaw, New York, are other licensees.[14]

About 1934 the infringing Bolser and Kari-Keen flares appeared on the market. These are the devices involved in cases 166 and 167.[15]

Many states have adopted laws which require trucks and busses parked along the public highways between sundown and sunrise to be marked by flares set alongside and at each end of the vehicle at prescribed distances therefrom. The flares made under the patent in suit and the Bolser, Kari-Keen and Anthes flares pass all these tests and meet all the requirements for making them acceptable for this service, whereas the old type open-flame torches or flares will not pass these tests and are not acceptable for this service.

All of the courts below recognized that the invention of the patent in suit was not anticipated. In the two decisions unfavorable to the patent it was held invalid for want of invention over the prior art—not for anticipation by the prior art. In a well reasoned opinion the District Court for the Northern District of Ohio held the patent valid and that the essence of the invention is the protection of the flame at its source, which leaves the body of the flame unprotected and free to act as a warning signal. The Court of Appeals for the Sixth Circuit treated the patent as merely one for a flame guard

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[14] Circulars illustrating and describing several of the licensed devices are in evidence as Exhibits 20 to 23 in the New York case.

[15] A Kari-Keen circular is found at page 197 and a Bolser circular at page 222 of the Ohio record. The Kari-Keen circular states:

> "The specially constructed burner will continually burn in a 40-mile gale and is not affected by rain or storm. The heat generated in this burner converts the fuel to a gas and only the gas burns. This adds a long life to the wick."

And the Bolser circular states:

> "The greatest advance in flare construction of all time. • • • Approved by Highway Commissions and Insurance Companies all over the United States."

and concluded, in the face of the foregoing facts, that what the patentees did lacked invention, reversing the decree of the District Court. The District Court for the Eastern District of New York, quite properly, deferred to the prior decision of the appellate tribunal. However, the Court of Appeals for the Second Circuit, passing squarely on the question of invention, found that the presumption of validity had not been overcome by the mere argumentative assertion that it required no invention to produce a kerosene burning torch which would accomplish the highly desirable results that were first accomplished by the patentees.

## SUMMARY OF ARGUMENT

1. The invention of the patent in suit is not anticipated. Although the device of the patent concededly produces new and highly useful results, no structure disclosed by the prior art is alleged to be capable of operation to produce the same or similar beneficial results, and no combination of old elements can be so operated without using such elements in a manner and for a purpose for which they had never been used prior to the invention of the patent in suit and for which they were not intended to be used.

2. The patent discloses invention. Substantially all the recognized indicia of invention are present to support the presumption of validity raised by the issuance of the patent, *viz.*, prompt acceptance by the public to the substantial exclusion of older devices used for similar purposes; accomplishing the same or better results at substantially reduced cost; acceptance and extensive use in fields not available to older devices; recognition of the patent by a number of manufacturers who have taken

licenses and are actively competing with the patent owners for public favor, and earlier unsuccessful attempts by others to produce a device which would overcome well known objections to the torches in common use. Moreover, the question of validity is not complicated by any claim of unfair use of the patent grant or suppression of the invention to the detriment of the public. On the contrary, the owner of the patent promptly commercialized the device and granted unrestricted licenses at a reasonable royalty to all who wished to operate under the patent.

3. The patent is infringed. The alleged infringing structures—the Bolser, Kari-Keen and Anthes flares—embody the same elements combined in substantially the same way as described and claimed in the patent and operate with substantially the same economy and efficiency to produce the same results as are produced by the "Economy" burner made under the patent by the owner thereof.

## ARGUMENT

### Point 1. The Invention of the Patent in Suit Is Not Anticipated

Although the device of the patent in suit concededly produces new and highly useful results, no structure disclosed by the prior art is alleged to be capable of operation to produce the same or similar beneficial results, and no combination of old elements can be so operated without using such elements in a manner and for a purpose for which they had never been used prior to the invention of the patent in suit and for which they were not intended to be used.

During the many years that torches have been used

as warning signals for protecting the public from injury or death due to the presence of obstructions or excavations on the public highways, there has been a need for one which would remain lighted in stormy weather. A reliable highway flare is a safety device of growing importance. No more sincere tribute to the success and value of a device of this character can be obtained than that emanating from the infringer. Thus, for example, the circular advertising the Bolser infringing structure states (O. R. p. 222):

> "Genuine Bolser Flares—For Safety.
>
> "This Safety Feature PREVENTS Accidents.
>
> "Liability insurance can rebuild a crashed car—pay a hospital bill—compensate for lost time, but it can't return the dead to life, or repair shocked and shattered nerves.
>
> "Protect yourself against the grief and pain of hurting others. Do your part to prevent the thousands of motor car accidents that occur every year because of stalled trucks, busses and cars being struck by speeding cars. Hundreds of thousands of others are barely avoided. Thousands of lives are lost—more thousands of people injured—millions of dollars worth of property damaged.
>
> "Your own good judgment says 'Use Flares.' Comparison and common sense say Use the Best Flares—the Genuine Bolser Flares—road tested and time tried.
>
> "Bolser Flares are your safety insurance. They are always ready for use—quickly set out or picked up—and more efficient than the law requires."

At a time when hundreds of thousands of persons are being killed and maimed on the public highways each year it would seem that a patent for a safety device which has been widely recognized as more reliable and efficient than any before known should not be lightly set aside on

the mere assumption that the thing should have been obvious to anyone who would take the trouble to look at the prior art. Yet that was the erroneous holding of the Court of Appeals for the Sixth Circuit. On the other hand, the Second Circuit Court of Appeals avoided this error.

Thus, as would be expected, there is a sharp conflict between these two Courts of Appeals as to what the prior art disclosed to one skilled in the art. In the Sixth Circuit decision, Judge Simons treated the patent as one for a flame guard and nothing more. He stated (Ohio R. 285; 93 Fed. (2d) 337):

> "Stripped of variations in nomenclature, and the ingeniously differentiated phrases of counsel in setting forth the claims, the invention is for a burner with a metal guard to protect the flame from air currents and rain. The art is full of illustration and description of metal guards for burners, typical of which are the patents to Almond, No. 193,796; Blake, No. 453,335; Kahn, No. 1,755,527; Heston, No. 270,587, and Hathaway, No. 147,496. • • • There is here no substantial evidence of effort general to the industry to solve a problem which long defied it. The proof is limited to experiments of the patentees, and so far as it goes it serves to demonstrate lack of awareness of the teachings of the art rather than the inherent difficulties of the problem itself. They chose the long road to solution, and the patent law does not reward mere persistence, unassociated with original creative effort."

In the Second Circuit decision, in which the prior art relied on was substantially the same as in the Sixth Circuit, Judge Manton, holding the patent valid, stated (N. Y. R. 451; 99 Fed. (2d) 808):

> "The prior art does not disclose or suggest the combination or result here obtained. The patent

to Rutz No. 1,101,146, granted June 23, 1914, had for its object

'to provide a simple, economical and effective flash igniter for a series of gas stove burners, the same being grouped about the igniter and within the field of entrained jets of flame, which jets are emitted from the igniter under the control of the operator.'

"This device was used on a kitchen gas range and many of them were sold. The flame they are designed to protect is a small pilot light, which burns continuously and is so feeble that it might be extinguished by indoor drafts, such as the sudden closing of a door. The flame is completely enclosed within the metal cap. The principal function of this cap is materially different from any function of a burner of the patent in suit. The fuel is not the same. Rutz uses gas under pressure. The patentee here uses kerosene which must be vaporized before it will burn and when vaporized is not under pressure. There is the problem of heating the fuel to vaporize it. Rutz makes provision for cooling the cap by providing a substantial space between the pilot light and the cap walls, also by passing a cylinder of air up through the vent openings in the supporting disk and out through vent openings near the top of the cap, whereas in the patent in suit the heat of the cap is utilized to assist in heating the kerosene in the wick above the flash point. In the Rutz patent there is no means for heating the cap if its use there were desirable. The pilot light is small and so far spaced from the cap that no substantial amount of heat will be transmitted to the cap, even in the absence of the rising cylinder of air inside the cap and along its walls. The flame which follows the jets of gas to the stove burners continues for only a fraction of a second and does not impinge upon the walls of the cap.

"Heating the cap is very important in the patent in suit, one of its functions being to supply heat to the wick and the oil in the wick tube so as to raise the oil above the flash point. In the Rutz patent

there was no problem of fuel or wick consumption, whereas these were important considerations of the patent in suit. Rutz had no problem of maintaining the flame under conditions of wind and rain."

The Rutz specification refers to the desirability of preventing the cap or hood from becoming heated, as follows (N. Y. R. 380, lines 51-57):

> "It is also essential to perfect combustion that the torch head tip 9', which burns a constant pilot-flame, should be spaced at a distance equal in all directions from the walls and dome of the hood to prevent generation of foul gases through the heating of said hood."

On the same page, at lines 96-106, the patent refers to the current of air which passes upwardly through the cap, stating:

> "In order to insure more perfect combustion I provide the hood dome with a series of auxiliary vents 13 that encircle said dome above the firing ports and hence air to supply oxygen to the flame will be more readily drawn up through the bottom of the hood and caused to pass in vertical stratas about the pilot-light and from thence through the firing ports and vents to effectually check cross currents of air while the small pilot-light is burning."

The Rutz cap was not designed for the same purpose as Withrow and Close's, no person looking at it or using it would understand that it was to be used in the way Withrow and Close's cap is used, and it is not shown to have been really used and operated in that way at any time prior to the date of the Withrow and Close invention.[16] In an effort to show how the Rutz cap could be used to produce results similar to those of the patented

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[16] Paraphrasing the language of the court in *Clough vs. Barker*, 106 U. S. 166, 176.

device, defendant in the New York case found a Rutz cap which would fit upon one of the Anthes flare bodies, and that combination was offered as Defendant's Exhibit L. This is a pure case of after-the-fact wisdom. Furthermore, there is no proof as to when this particular Rutz cap was made, but we know that the Anthes body was not made prior to 1933, because Anthes first made these flares during that year as a licensee under the patent in suit.

Referring to the new function this Rutz cap would thus be called upon to perform, defendant's expert stated, "you lift it from one purpose to another."[17] This statement was made in answer to a question by the court during the redirect examination. Following it the witness testified (N. Y. R. 127):

> "RDQ. 339. In transferring the Rutz hood to a torch body do you make any change in its function or operation? A. All the principles of operation remain the same.
>
> "RXQ. 340. Do you mean just that? There is a difference in the function, is there not? A. The principlez remain the same.
>
> "RXQ. 341. The function is different, isn't it? A. Oh, yes, sir." (Emphasis ours.)

This same witness testified that he was familiar with the Rutz cap from having one on his stove, and that before he was shown Exhibit L he had seen plaintiff's and defendant's devices and knew what they were used for and that they would withstand wind velocities as high as 40 miles per hour.[18] Yet he was surprised to find that he could not blow out the flame of the Exhibit L combination, consisting of a Rutz cap on an Anthes body.[19] Al-

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[17] N. Y. R. 127, f. 379.
[18] N. Y. R. 106, XQ. 236-239; 107 XQ. 247.
[19] N. Y. R. 89, Q. 114.

though he had one of these caps on his gas range he had never associated it with wind. He testified (N. Y. R. 107):

> "XQ. 248. And it never occurred to you, with your familiarity with those caps for years, that a thing like that could withstand the wind that it did? A. I never tried it in a wind. I know it always stood up on our gas range. I never associated it with wind."

Plaintiff's expert, Dr. Olsen, is in entire accord with Dr. Luckiesh in this regard. He testified (N. Y. R. 204):

> "Q. 35. Will you please give us your opinion as to whether or not with full knowledge of the Rutz patent and its disclosure, would it give any helpful information to one seeking to produce an open air enclosed flame torch that would withstand wind velocities of gale proportions? A. No, I can't see that it would."

The other reference mainly relied on in the Second Circuit case was the Russian patent to Malcov, concerning which Judge Manton stated (N. Y. R. 452; 99 Fed. (2d) 809):

> "The Russian patent to Malcov, No. 1163 of 1868, is for a lamp burner of special construction. The description is meager and the drawing vague and it is justly so criticized. The specifications refer to two tubes and state that between them 'there remains a space into which may enter a third tube called regulator and intended for the adjusting of the size of the flame.' Apparently it was intended to use charcoal which would become heated above the flash point of the oil and hydrocarbon vapors (and) would escape through the small perforations in the dome, where they would mix with the air and burn. The experts called were unable to understand the disclosure of this Russian patent. It does not anticipate the patent in suit."

Defendant in the New York case made up a device (Defendant's Exhibit I) which was offered as illustra-

tive of the Malcov disclosure, and a drawing of this made-up device was offered as part of Exhibit B.[20] Concerning this Malcov figure on Exhibit E, defendants' expert, Dr. Luckiesh, testified (N. Y. R. 102, 103):

> "XQ. 206. Well, see if I understand what you mean. In the drawing, Defendant's Exhibit B, which purports to represent it—you mean there is a tube inside the tube A of that drawing? A. Inside the tube A—yes, that is my recollection. That is the best we could get out of our combined ideas of what the patent meant.
>
> "XQ. 207. There is quite a little dispute between you as to what the Russian patent did mean? A. As we said before, it is rather an incomplete sort of a statement.
>
> "XQ. 208. You had to do a lot of arguing back and forth and a lot of conjecture? A. Well, we had to discuss it.
>
> "XQ. 209. I presume all of you had different ideas about it? A. I don't think so, eventually.
>
> • • • • • •
>
> "XQ. 213. So that that inner tube is not shown in that drawing? A. Either the inner or the outer, but it must be the inner, because of this (indicating)."

There are really three tubes called for by the patent. The specification refers to two tubes *a* and *b*, and states that between them "there remains a space into which may enter a third tube called regulator and intended for the adjusting of the size of the flame."

Plaintiff's expert, Dr. Olsen, also had difficulty in understanding the disclosure of this Russian patent. He testified (N. Y. R. 205, 206, 228):

> "Q. 41. All right, let us take up this Russian patent, Fig. 4 of Defendant's Exhibit B. Do you agree with Dr. Luckiesh—
>
> The Court:
>
> That is the Malcov patent?

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[20] N. Y. R. 321.

Mr. Darby:

Yes, the Malcov patent, Fig. 4, Exhibit B.

"Q. 41 (continuing): Do you agree with Dr. Luckiesh that the disclosure of this patent is ambiguous and vague? A. Oh, yes, I spent a lot of time on that trying to figure it out.

"Q. 42. Have you yet figured out what the structure was? A. I am not certain we have got it figured out, but I think this is probably a close approximation to it. Whether it is right or not, whether there are four members supporting this or two, is a question. It seems to me there are only two, and I think in the model he has got four. I think his description indicates only two. Other than that he did have a perforated top and a couple of wings, shown here. (Indicating.)

"Q. 43. And when you refer to the model, you mean Defendant's Exhibit I? A. Yes.

* * * * *

"XQ. 218. The entire portion in which the dots are shown in this structure is a solid piece of metal except for these minute openings? A. Well, of course, you have drawn it here according to your conception of this thing, but if I should draw it according to my conception I would put the wings on each side and I would extend those across and make the top.

"XQ. 219. You would put a dome across the top? A. Yes, with these two wings.

"XQ. 220. And on the side there would be— A. Metal.

"XQ. 221. Metal? A. Yes, sir, on two sides. That is just a matter of speculation, because it is not very clear."

Besides omitting two of the three tubes, the so-called model of this Russian patent omits any representation of the following portion of the construction called for by the patent (N. Y. R. 327, f. 980):

"* * * In order to protect the top portion of the wick from deterioration, the upper portion of the burner directly above the wick is packed with

asbestos, crushed charcoal or some other incombustible material readily conducting liquid; in this connection care is to be taken that no more than ¼ inch of free space is left to the upper exterior end of the burner."

From this it will be seen that the Second Circuit Court of Appeals was quite correct in holding that the prior art would not have taught or even suggested the invention of the patent, and that what is disclosed and claimed thereby required inventive ingenuity of a high order.

Of the patents referred to by Judge Simons, Kahn[21] was for a hood for flash igniter, similar to that of Rutz, and the remarks of Judge Manton are applicable. The others are less pertinent.

**Almond**, 193,796 of 1877,[22] was for a heater, not a signal device. Defendant's expert in the Ohio cases said that he had not built a model of Almond because he "did not want a heating burner." Almond's asserted purpose was to "produce a perfect heating flame, useful for many purposes in the arts."[23] He surrounded his burner with a perforated sheet metal shield G, entirely open at the top. At its lower end this shield was secured to a "wooden or other bad heat-conducting base-block E, * * * to keep the flame above from unduly heating the reservoir." And to still further prevent transfer of heat to the wick tube or reservoir he proposed to cover the wooden block E and the tube D (which encloses the wick tube) "with asbestos-paper or other non-combustible substance."[24] Thus, Almond intentionally guarded against heating the wick and the fuel contained therein, which is

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21 Ohio R. 260.
22 Ohio R. 241.
23 Ohio R. 243, first column, lines 10-11.
24 Ohio R. 242, col. 1, lines 8 to 15 from bottom.

one of the important features of the burner of the patent in suit, essential to its successful operation.

Dr. Olsen conducted a series of tests of the Economy and Anthes flares during which he took the temperatures of the caps and of the fuel in the wick tubes. He found the cap temperatures to run as high as 718° F. and that the heat from the cap was conducted "into the flange and into the tube surrounding the wick, and this heat would supplement the heat from the small flame in the combustion zone, and would succeed in maintaining the temperature of the wick tube and the kerosene which would be vaporized and keep that flame going."[35] After burning the devices for five or ten minutes, he thrust the bulb of a thermometer up into the fiber of the wick in the wick tube and found the temperature to be between 153° and 210° F., "and this temperature was reached even in a forty-mile wind. In other words, high wind velocity did not seem to succeed in eliminating this little flame, or cooling the kerosene, whether it be the Anthes or the Toledo; they both acted alike in that respect, they both gave us this high temperature of feed." Kerosene gives off no combustible vapors at ordinary temperatures, but must be heated to the flash point, which runs up to 150° or 160° F.[36]

Both Withrow and Close testified that a burner made in accordance with the Almond patent would not stay lighted in a moderate wind with the shield G in place and that it would be less reliable with the shield removed, as respondents in the Ohio cases proposed to do in order to make it a reference against the patent in suit. There is no evidence to the contrary.[37]

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[35] N. Y. R. 197, f. 591; 217, f. 649.
[36] N. Y. R. 196, f. 587; 197, f. 589.
[37] Ohio R. 133, top; 137, bottom.

**Heston** 270,587 of 1883[28] was for a vapor burner. The part which might perhaps be superficially thought of as a shield or guard, served no such function. It comprised two caps B and C, one over and adapted to revolve upon the other. There were holes in each, and by the revolution of the outer upon the inner, the registration between the holes might be regulated, thereby determining the size of the issuing gas jets. Neither in construction nor function do these caps suggest the shield of the patent in suit. The vapor was generated in the chamber M' at the left of Figure 1, from whence it passed downwardly through vapor pipe Q and branch pipe V and thence upwardly in a jet through pipe R to chamber A, "from which chamber it issues through the perforations and openings before set forth."[29] There was no wick or wick tube and the burner was intended for heating.

**Hathaway** 147,496 of 1874[30] was for a lamp burner which produced a flame from minute horizontal radiating jets of vapor. The cap or cover seems not even remotely to suggest the patentees' cap. The lamp was of course not designed to be used in the wind. The cap had lips extending horizontally outward near the gas jets and so gave some measure of protection from slight drafts, but did not suggest the patentees' device either in form or function.

**Blake** 452,335 of 1891[31] was for a burner intended for use with "the lighter and more volatile oils—such as naphtha or gasoline—which vaporize at moderate heat." The cap was similar in construction and function to those of the flash igniter patents of Rutz and Kahn. It had air inlets $c'$ at the bottom and openings $c^2$ in the sides,

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[28] Ohio R. 244.
[29] Ohio R. 246, lines 67, 68.
[30] Ohio R. 233.
[31] Ohio R. 247.

which registered with jet openings $b^3$ in the vaporizing chamber $B^3$. Minute jets of vapor were shot horizontally out through the registering openings in the outside wall of the chamber. The device might be operated with a previously formed gas as well as by vaporizing naphtha or gasoline. It was not intended that the jets of flame would unite in one large flame, the patent stating that the "devices employed are designed also to make the maximum flame consist of radiating jets rather than a continuous integral flame."[32] There was no wick; on the contrary, the supply tube A was filled with an absorbent or porous substance $A^1$, to check the flow of the fluid to the burner, which indicates that the fuel was under pressure.

There is no proof in the Ohio record that any of these prior art structures was ever made or used. In the New York case it was proven that the Kahn and Rutz flash igniters have been used, the latter to the extent of 15,000,000. All the others are "paper patents."

The problem which confronted Withrow and Close was quite different from any to which these prior patents were directed. The luminescent flame of the old style open torch burner, resulting from imperfect combustion, provided an ideal warning signal so long as it stayed lighted. The proofs show that with the wick extended an inch and a half it would sometimes remain lighted in a wind up to about twenty-five miles an hour if unaccompanied by rain. The wick was soaked with kerosene and burned from the sides as well as the top. Defendant's expert in the New York case aptly referred to it as "a bonfire of cotton fibre." High fuel and wick consumption were natural consequences. As much as 1¼ inches

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[32] Ohio R. 248, lines 30-33.

of wick was consumed in one night. A strong cold wind would blow the flame away from the wick and cool the oil below the flash point, thus causing the flame to go out. If water soaked the wick, it would vaporize and cool the wick down below the flash point, and the flame would go out.

The flame produced by these open-flame torches was 3 or 4 inches in diameter, 6 to 8 inches high, of irregular shape, flickering and weaving from side to side with changing air currents. Its very instability made it a better warning signal on the public highways than the colored lantern with its small, steady, protected flame. This was especially true after the advent of the automobile, when a red lantern could not be distinguished from a tail light.

Mr. Close, one of the joint inventors, has manufactured torches and flares continuously since 1925, has made nearly a million of them, has witnessed thousands of operations of them in the open air and has "never seen any conditions when the flame was not moving when the torch was placed outdoors." This applies to both the old open-flame and the patented torches.[33]

For these reasons the open torch flame made an ideal warning signal, if only it could be made to stay lighted. The problem was not to enclose the flame, as the Ohio court assumed. Even could that be done with a flame of this size, its utility as a warning signal would be destroyed. On the contrary, the problem was to preserve this open, unsteady flame and to maintain it under all kinds of weather conditions, without enclosing it.

The prior patents relied on afford no suggestion as to how this problem could be solved. In none of them

[33] N. Y. R. 183, f. 549; 190, f. 568.

is there a small flame burning from a wick inside a protected chamber, with utilization of heat from this small flame and from the chamber walls to raise the temperature of the fuel in the wick above the flash point, thus providing a supply of vapor for a flame to be burned partially inside on the wick but mainly outside the chamber.

When Dr. Olsen was told that the Economy and Anthes flares would withstand a 40-mile gale, he was surprised and wished to learn why this was so when ordinary flames blow out so easily. He thereupon purchased three each of the Economy and Anthes flares and subjected them to various tests. His explanation for the unexpected results may be summarized as follows:

1. The three fuels—gas, gasoline and kerosene—are very different from the standpoint of the burner. They burn only in gaseous form. Fuel gas is already completely in a gaseous form at all normal temperatures. Gasoline readily volatilizes and produces combustible vapors down to zero Fahrenheit. Kerosene gives off no combustible vapors at ordinary temperatures, but must be heated to the flash point, which runs up to 150° or 160° Fahrenheit.[34]

2. He found a small protected combustion chamber in the bottom of the cap in both devices, provided with restricted air inlets, "so that when you once light it you have a little chamber where a little air is admitted, and which maintains the temperature of the wick to the point where it will give off vapor."[35]

3. He found the cap temperature to run as high as 718° F., and that the heat from the cap was conducted "into the flange and into the tube surrounding the wick,

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[34] N. Y. R. 195, f. 584; 195, f. 587.
[35] N. Y. R. 196, f. 588.

and this heat would supplement the heat from the small flame in the combustion zone, and would succeed in maintaining the temperature of the wick tube and the kerosene which would be vaporized and keep that flame going."[36]

4. After burning the devices for five or ten minutes, he thrust the bulb of a thermometer up into the fiber of the wick in the wick tube and found the temperature to be between 153° and 210° F., "and this temperature was reached even in a forty-mile wind. In other words, high wind velocity did not seem to succeed in eliminating this little flame, or cooling the kerosene, whether it be the Anthes or the Toledo (Economy); they both acted alike in that respect, they both gave us this high temperature of feed."[37]

To summarize Dr. Olsen's findings, there is a small protected zone or chamber below the flame exit openings in these devices into which chamber a little air is admitted. When the wick is lighted a small portion of the flame burns in this protected chamber, and this flame assists in maintaining the temperature of the wick above the flash point. When the cap becomes heated the heat from the cap is transmitted to the wick tube and wick through the flange which supports the cap, thus supplementing the heat from the small flame in the protected chamber in maintaining the kerosene in the wick above the flash point and insuring a constant supply of hydrocarbon vapor for the torch flame outside the cap.

Dr. Olsen concluded his testimony in this connection by saying (N. Y. R. 197, f. 591):

> "And when I reached that conclusion after these experiments, I thought I understood how this device operated."

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[36] N. Y. R. 197, f. 591; 217, f. 649.
[37] N. Y. R. 197, f. 589.

After subjecting three each of plaintiff's and defendant's flares to various tests, Dr. Olsen said: "I could get just as big a variation between three different samples of the Anthes flare and from three different samples of the Toledo flare as I could between any two of them." He further said (N. Y. R. 198, f. 594):

> "And when I got through and averaged up, they were just about as alike as two twins, or two peas in a pod. There were little differences, but I thought they were insignificant."

The accomplishment of the patentees Withrow and Close strikingly appears from the fact that the patented burner withstands all the severe tests to which truck flares are subjected by State Highway Departments before they will be approved. The earliest and at the present time one of the milder series of tests are those for the State of Iowa. These are set forth in a letter from the Iowa State Highway Commission and include wind tests, combined wind and rain tests, a carbon deposition test and a length of burning time test.[38]

The wind tests require that a flare remain lighted for at least 30 seconds in a 40 m.p.h. wind and that it shall burn continuously in a 26 m.p.h. wind. The combined wind and rain tests require that the flare shall burn for at least 5 minutes in a 26 m.p.h. wind with rain applied at the rate of 2.48 inches per hour. The carbon deposition test requires that the carbon deposition be light and the flare remain in such condition that it will pass the two preceding tests. The time test requires that the flare shall burn for at least eight hours.

The tests for Pennsylvania and a number of other states are more severe. The Electrical Testing Labora-

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[38] Ohio R. 210; N. Y. R. 314.

tories of New York conducts the tests for Pennsylvania. They include a weatherproof test in which the lighted flares are subjected to a spray of water at 1/10th of an inch a minute (6 inches an hour) for 15 minutes, then 3/100ths of an inch a minute (1.8 inches an hour) for 30 minutes, and finally 1/100th of an inch a minute (.6 inch an hour) for 45 minutes, during which time the flare is rotated at the rate of 4 revolutions a minute, the water being applied on top of the flare through a standard spray at an angle of 60°; a visibility test which requires that the flame be visible at a distance of 500 feet at both 5 m.p.h. and 40 m.p.h. wind velocity, and a reliability and light test which requires that a flame withstand a 40 m.p.h. wind for 15 minutes while being rotated at the rate of 4 revolutions a minute, followed by a 5 m.p.h. wind for 11 hours and 45 minutes, or a total of 12 hours continuous burning time.[39]

Plaintiff's flare and all three of the infringing flares involved herein withstand these or similar tests, whereas the old open-flame flares will not withstand even the milder Iowa tests.[40]

In brief summation of this point, the fact that the patented flare or torch was new, extremely useful, reduced operating costs by half, and supplied an extensive demand of many years standing is not disputed. We therefore next take up a consideration of whether or not inventive ingenuity was required to produce that device.

### Point 2. The Patent Discloses Invention

Substantially all the recognized indicia of invention are present to support the presumption of validity raised

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[39] N. Y. R. 42, 43.
[40] Ohio R. 211; N. Y. R. 315.

by the issuance of the patent, *viz.*, prompt acceptance by the public to the substantial exclusion of older devices used for similar purposes; accomplishing the same or better results at substantially reduced cost; acceptance and extensive use in fields not available to older devices; recognition of the patent by a number of manufacturers who have taken licenses and are actively competing with the patent owners for public favor, and earlier unsuccessful attempts by others to produce a device which would overcome well-known objections to the torches in common use.

**(a) Prompt Acceptance by the Public to the Substantial Exclusion of Older Devices Used for Similar Purposes.**

During the years 1926 to 1928, inclusive, The Toledo Pressed Steel Company sold a total of 66,751 Toledo open-flame torches. The Toledo Economy burner and torch were placed on the market late in January of 1929 and during the remainder of that year 46,624 of these complete torches and 18,359 separate burners were sold. The separate Economy burners were sold to owners of the old Toledo torches, being so constructed that they could be substituted for the burners with which those torches were originally equipped. During the succeeding five depression years, when its business in other lines had practically stopped, the Toledo Company sold nearly 300,000 of its Economy torches and flares and over 17,000 separate Economy burners, and during the years 1935, 1936 and 1937 more than 450,000 Economy torches and flares were sold. For a year or eighteen months after the

Economy torch was placed on the market there were a few sales of the old Toledo open-flame torches and then they stopped entirely.[41]

**(b) The Patented Torch Accomplishes Better Results Than Those of Its Predecessor—the Open-Flame Torch—at Less Than One-Half the Cost**

The results obtained from torches and flares embodying the invention of the patent in suit are better than those obtainable from the old open-flame torch because of the greater reliability of the patented devices in stormy weather, and the cost of operation has been reduced more than 50% in fuel consumed and practically 100% in the amount of wick consumed. The manufacturers recommended 1½ inch or more wick exposure for the old torch and recommend ⅛-inch wick exposure for the patented torch.[42]

**(c) The Toledo Economy Flares Are Accepted and Extensively Used in a Field Not Open to Any Torch or Flare of the Prior Art.**

The open-flame Toledo torch was not acceptable for use as a warning signal for parked trucks and busses because of its unreliability; nor were red lanterns, because of their resemblance to automobile tail lights. In October, 1929, the Toledo Company received a letter from the Michigan Public Utilities Commission that their Economy torch passed the requirements made by that commission "regarding all common carriers carrying two

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[41] N. Y. R. 25, 26, 28.
[42] Ohio R. 167, 182, 185-191, N. Y. R. 21, f. 63, 239, 307-309

oil burning torches."[43] We have already pointed out that petitioners' and respondents' flares all pass the state tests and that the old open-flame type do not.

### (d) The Patent in Suit Has Been Recognized by a Number of Manufacturers Who Have Taken Licenses.

As previously stated, Anthes Force Oiler Company, manufacturer of the flare held to infringe in the New York case, took a license under the patent in 1933. Under that license it manufactured and sold the flare illustrated at page 253 of the New York record. Later it changed the construction slightly and refused to pay royalties on the ground that the patent does not cover the changed structure, whereupon its license was terminated. In 1934 K. D. Lamp Company, of Cincinnati, and Doray Lamp Company, of Chicago, took licenses. Subsequently, R. E. Dietz Company, of New York City; Shanklin Manufacturing Company, of Chicago, and Embury Manufacturing

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[43] Ohio R. 68, 69, 184. To take care of this truck business the Toledo company brought out the flare illustrated in the circular at page 258 of the New York record and by Exhibit 19 in that case. An Economy torch is in evidence as Exhibit 17 in the same case and is illustrated in the circular at pages 181, 181a of the Ohio record. These torches and flares pass the most severe tests prescribed by any of the states. A typical state law is that of Iowa, which provides (Ohio R. 80):

> "Section 1. Motor trucks and combinations thereof operating on the highways during the period from one half (½) hour after sunset to one-half (½) hour before sunrise shall at all times be equipped with portable flares which may be plainly visible for a distance of five hundred (500) feet. The operator of a motor truck or combination shall, immediately upon bringing his vehicle to a stop upon or immediately adjacent to the traveled portion of the highway at any time during the period from one-half (½) hour after sunset to one-half (½) hour before sunrise, place a flare at the side of such vehicle and in plain view of all traffic, and shall maintain it in such position during the time such vehicle remains parked."

One of the rules adopted by the Iowa Public Utilities Commission under this law reads (Ohio R. 80):

> "Place lighted pot torches 100 full steps ahead and behind the vehicle at least one full step out in the road, and a lighted pot torch along the side of the vehicle which others pass. In the daytime use flags instead of pot torches, except at side of vehicle."

Company, of Warsaw, New York, have taken licenses.[44] Circulars illustrating several of these licensed structures, which are being sold in active competition with the Toledo Economy torches and flares, are in evidence in the New York case as Physical Exhibits 20 to 23.

### (e) Others Attempted to Overcome the Objections to the Open-Flame Torch, But Without Success.

1. In 1913 the Detroit United Railways adopted a heavy cast iron open-flame torch for use in connection with its street railways. Prior to that time they had used only red lanterns. One of these torches is shown at A in the photograph at page 261 of the New York record. It was provided with three separate wick tubes and wicks, the idea being that if one of the wicks remained lighted during wind or rain it would relight the others. It was found that all three flames would be extinguished by heavy rain and wind, and about 1920 an effort was made to improve this condition by placing a flat metal disk or umbrella over and a short distance above the ends of the wicks.[45] Concerning their use, Mr. Kerwin, Superintendent of Way and Structures Department of Street Railways, City of Detroit, which has owned and operated the street railway system since about 1922, testified (N. Y. R. 60, f. 178):

> "To the best of my recollection, we experimented with this umbrella over the three wicks for a period of a couple of years and then discarded it as giving just as much trouble and having just as many flames go out as if we hadn't carried it at all. It did not remedy the defect that we were

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[44] N. Y. R. 27, 29.

[45] This is shown in the blue print Exhibit 9, the pertinent figure of which is reproduced at the end of this brief.

trying to overcome. We have trouble today from these torches being blown out or rained out. For the protection of the public under those conditions, all excavations are protected at night time, in addition to the mechanical protection of torches, by watchman. He has many duties, takes care of the tools, watches them that nobody steals them, and makes the rounds regularly to see that the torches are burning, and if they are extinguished by rain or high wind, it is his duty to relight the torches."

Thus it will be seen that, although the Detroit United Railways had every incentive to produce a flare or torch possessed of the qualities of the one of the patent, and endeavored to do so, it failed utterly. After two years' experimentation it went back to the old unprotected torch, which it could use with reasonable safety by utilizing a watchman as an attendant therefor, thus making the best of an undesirable situation.

2. R. E. Dietz Company, of New York, is the oldest and largest manufacturer of lamps and signal lamps in this country. Early in 1928 it decided to add a torch to its line of signal devices and secured one of the Toledo open-flame torches for experimental purposes. The designing of the new torch was in charge of Mr. Currie, who had been with Dietz for twenty-five years and was Works Manager of the Dietz factories, in charge of all production. The Toledo torch was sent to him at Syracuse, where the principal Dietz factory is located, to experiment with.[46] He found that this old Toledo torch used a great deal of oil, that it was not weatherproof, particularly in rain, and would not stand up against wind unless the wick was raised considerably above the burner. At ½-inch extension he said it would withstand about 35

[46] N. Y. R. 167, f. 500.

miles an hour, and with 2-inch extension it would withstand a 40 mile an hour wind, without rain.[47]

Mr. Currie spent a great deal of time in an unsuccessful endeavor to produce a torch which would overcome the defects of this open-flame Toledo torch. His efforts were continuous and extensive throughout the better part of the year 1928. Incidentally, this was contemporaneous with the experiments of the patentees, illustrated at pages 270 to 287 of the New York record, which resulted in the production of the torch of the patent in suit.[48]

The experience and knowledge Mr. Currie brought to this work are of great importance on the question under consideration. His inventive ability is well illustrated by the fact that he has taken out fourteen patents and has three pending applications. Since prior to 1928 it has been the practice of his company to keep a current up-to-date file of patents pertaining to the art in which it is interested. He went through this file and considered these patents before starting his experimental work. It included copies of the Rutz and Maleov patents selected by defendant's counsel in the New York case as the best references.[49]

For six years prior to 1928 Mr. Currie had been familiar with the Rutz flash igniter made in accordance with Rutz patent No. 1,101,146. The gas range in his home was equipped with one of these Rutz igniters, with

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47 N. Y. R. 168, f. 504. These figures are higher than other tests have shown. Exhibit 30 (N. Y. R. 311, f. 933) gives the results of wind velocity tests conducted with the four torches shown in Exhibit A reproduced at page 261 of the New York Record. The torch marked B is like the one tested by Mr. Currie. With the wick extended 1¼ inches this torch was extinguished in 15 seconds at a wind velocity of 26.9 m.p.h. and in 2½ minutes at a wind velocity of 28.7 m.p.h. It remained lighted for the full test period of 15 minutes at a wind velocity of 25.1 m.p.h.

48 N. Y. R. 168, f. 503; 169, f. 505.

49 N. Y. R. 176, f. 526; 178, f. 534.

which he was personally familiar, having had occasion to take it apart and clean it.[50]

With this background of experience and information Mr. Currie started in to develop a torch which would overcome the objections to the old open-flame Toledo torch and which his company could market in competition with that torch. Notwithstanding his knowledge of the best prior patented art and his intimate familiarity with the Rutz flash igniter, and the fact that he was not merely a skilled mechanic but an inventor in this line of industry, Currie proceeded by the cut and try process of constructing and testing out burners in the open air, precisely as did the patentees Withrow and Close, and instead of taking the short cut assumed by Judge Simons to have been possible by one who was not handicapped by "lack of awareness of the teachings of the art" he failed entirely in arriving at a solution.

It was no doubt because the patentees and Currie understood and appreciated "the inherent difficulties of the problem itself" that they proceeded as they did. That problem, as we have stated, was to keep the wind and rain away from the source of the flame to an extent sufficient to preserve the flame under all kinds of severe weather conditions and still let the flame out in sufficient volume and suitable quality to act as a warning signal. Judge Hahn aptly referred to the invention as for the "protection of the flame at the source," and we have the apparent inconsistency of a burner which will withstand gales and torrential rains and yet can be blown out by the breath if directed through one of the flame openings in a diagonally downward direction onto the wick.[51]

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[50] N. Y. R. 169, f. 506; 175, f. 525.
[51] N. Y. R. 179, f. 537.

Regarding Currie's experiments he testified that he designed and constructed a number of burners which he subjected to outdoor tests, both around the factory and at his cottage at a lake near Syracuse. These experiments were carried on practically daily.[52] He produced two of the experimental devices made and tested in 1928 which he was able to locate readily, and these are in evidence as Exhibits 37 and 39. Exhibit 37 would stand up against wind but not against rain. None of the devices he tried was sufficiently successful to cause its adoption as a commercial product and following these experiments his company came out in the fall of 1928 with an open-flame torch which was substantially identical with plaintiff's open-flame torch which Currie had been trying to improve. His experiments during 1928 did not produce a torch which he regarded as better than the old open-flame torch which he ultimately resorted to, and in which the wick was exposed about an inch and a half.[53]

Plaintiff's patented torch was placed on the market in January, 1929, after Dietz had brought out its open-flame torch, and Currie heard of it during that month. One of them was sent up to him from the Dietz New York office late in February of 1929 and he found that it solved the problem he and his associates had been unable to solve. He testified that it "became evident immediately that if we desired to remain in the competing field we would have to have something as good," and they worked from February to November before they completed the Exhibit 41 burner which they later placed on the market.[54]

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[52] N. Y. R. 169, f. 505; 173, f. 519; 175, f. 524.

[53] N. Y. R. 171, f. 512, 513.

[54] N. Y. R. 172, f. 515.

After Dietz Company placed this new burner on the market, it was notified of infringement of the patent in suit and took a license. One of the provisions of the license agreement is that the licensee shall make available to the licensor any facts which may be of value to it in connection with the patent. The facts to which Mr. Currie testified were first disclosed to plaintiff on or about February 9, 1938.[55]

One of the protected experimental burners produced and tested by Mr. Currie during these 1929 experiments is in evidence as Plaintiff's Exhibit 38. It would blow out and also went out in a heavy rain.[56]

3. Supplementing this Dietz experience as proving that the solution of this problem was not obvious is the fact that McCloskey Torch Company, of Toledo, a bitter competitor of plaintiff located in the same city and selling to the same trade, continued to manufacture and sell the McCloskey open-flame torch from 1925 until a few months after the patented Economy torch was placed on the market, when it came out with a torch almost identical in construction with the Economy torch, to which it gave the name "Cyclone" and advertised it as a "wonderful improver nt."[57]

This court frequently has stated that invention is a question of fact. If the rule stated in *Radio Corporation of America vs. Radio Engineering Laboratories, Inc.*, 293

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[55] N. Y. R. 173, f. 517; 178, f. 534.

[56] N. Y. R. 171, f. 512; 176, f. 527.

[57] N. Y. R. 303, 305. The earlier McCloskey torch is shown at pages 299 and 301 of the New York Record.

U. S. 1,[55] that one otherwise an infringer **bears a heavy burden of persuasion** and must fail "unless his evidence has more than a dubious preponderance," is applied to the facts of record in these cases, the decrees of the Sixth Circuit Court of Appeals should be reversed and that of the Second Circuit Court of Appeals affirmed. In neither record is there even a "dubious preponderance" of evidence to establish invalidity for lack of invention.

Moreover, the question of validity is not complicated by any question of unfair use of the patent grant or suppression of the invention to the detriment of the public. On the contrary, the owner of the patent promptly commercialized the device and granted unrestricted licenses at a reasonable royalty to all who wished to operate under the patent.

The records in these cases present a question of patent validity, pure and simple, not complicated by any question of public interest, suppression of competition or misuse or abuse of the patent monopoly. Plaintiff in these cases is a small company located in Toledo, Ohio. When complaints came in regarding the reliability of its principal product (the open flame Toledo torch), it had

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[55] In an opinion by Mr. Justice Cardozo, the court said (pp. 2 and 7):

"• • • Even for the purpose of a controversy with strangers there is a presumption of validity, a presumption not to be overthrown except by clear and cogent evidence. • • • A patent regularly issued, • • • is presumed to be valid until the presumption has been overcome by convincing evidence of error. The force of that presumption has found varying expression in this and other courts. Sometimes it is said that in a suit for infringement, when the defense is a prior invention, 'the burden of proof to make good this defense' is 'upon the party setting it up,' and 'every reasonable doubt should be resolved against him.' • • • Through all the verbal variances, however, there runs this common core of thought and truth that *one otherwise an infringer* who assails the validity of a patent fair upon its face *bears a heavy burden of persuasion*, and fails unless his evidence has more than a dubious preponderance. • • •" (Italics ours.)

See also *Diamond Rubber Co. vs. Consolidated*, 220 U. S. 428, at p. 434 near bottom, and *Mumm vs. Decker & Sons*, 301 U. S. 168, at p. 171.

no corps of engineers to whom it could refer the problem for solution. On the contrary, its president and vice-president, Messrs. Withrow and Close, attacked the problem in the only way open to them, *viz.*, the building of burner after burner and placing them lighted in an exposed place on the roof of their factory building where they could watch their performance from the office window. Each new burner was tested alongside the best of their previous experimental burners and the burner of the patent in suit was finally developed and adopted as the best.

It is pure fiction to assume that they or anyone else could have solved this problem merely by studying the burners of the prior art and applying the knowledge thus obtained to the problem in hand. The records are utterly devoid of anything on which to base such an assumption. Conversely, the New York record discloses two unsuccessful attempts to solve the problem, and shows further that when the experienced Mr. Currie of the Dietz Company attempted to overcome the objections to the open flame Toledo torch, he proceeded in precisely the same manner that Withrow and Close followed, by making up burners and testing one after another in the open air either at the Dietz factory in Syracuse or at his summer cottage at a lake near that city. Currie's experience is the more impressive because of the fact that he had had many years' experience in the burner field as Works Manager for the Dietz Company and was an extensive inventor in his field; also because he had available and examined the patent files of the company and was intimately familiar with the construction and operation of the Rutz flash igniter before starting his unsuccessful experiments which were carried on during the greater part of the year 1928.

While it may be true that "the patent law does not reward mere persistence, unassociated with original creative effort," as stated in the Sixth Circuit opinion, it is also true, as stated by this court in *Diamond Rubber Co. vs. Consolidated Tire Co.*, 220 U. S. 426, 435, that:

> "* * * Many things, and the patent law abounds in illustrations, seem obvious after they have been done, and, 'in the light of the accomplished result,' it is often a matter of wonder how they so long 'eluded the search of the discoverer and set at defiance the speculations of inventive genius.' * * * Nor does it detract from its merit that it is the result of experiment and not the instant and perfect product of inventive power. A patentee may be baldly empirical, seeing nothing beyond his experiments and the result; yet if he has added a new and valuable article to the world's utilities he is entitled to the rank and protection of an inventor. And how can it take from his merit that he may not know all of the forces which he has brought into operation? It is certainly not necessary that he understand or be able to state the scientific principles underlying his invention, and it is immaterial whether he can stand a successful examination as to the speculative ideas involved." (Citing a large number of cases.)

That Withrow and Close "added a new and valuable article to the world's utilities" will not be denied; that the flame produced by the device of the patent is just as effective a warning signal as was the flame of the old type torch is not questioned; that the device of the patent meets the tests of the State Highway Departments while the old type torch does not is admitted, and that it accomplishes this desirable result at a saving of more than 30% in fuel consumption and with a practical elimination of wick consumption is abundantly proven.

Having obtained its patent the Toledo company pursued a plan which is beyond criticism. Not only did

it immediately place the invention on the market in the form of complete torches and flares, but it made the patented burner in such form that it could be purchased separately and substituted for the open flame burners of its old type Toledo torches then in the hands of the public.

Furthermore, plaintiff granted unrestricted licenses on the low royalty of 3c per torch, flare or burner, to all competitors who wished to operate under its patent.

**Summary of Point 2**

In brief summation of this point it is submitted on the foregoing that what the patentees did amounted to invention. Certainly there is no justification for the holding of the Sixth Circuit Court of Appeals that it did not amount to invention, on the theory that anyone skilled in the art, with the knowledge of the prior art here relied upon, could have done what the patentees did. We can conceive of no better or more persuasive evidence to negative such an assumption than concrete instances of extensive unsuccessful efforts by skilled and experienced inventors over considerable periods of time, with knowledge of the prior art here relied upon, to produce a flare or torch which would function and serve like and for the purposes for which the patented torch was created. The usual mythical man skilled in the art has been replaced in this case by living people possessed of and urged by every inducement to succeed. When they failed, notwithstanding their best and most skilled efforts, how can the mere assumption of want of invention be said to overcome the presumption of validity which attached to the patent on its grant?

## Point 3. The Patent Is Infringed

The alleged infringing structures—the Bolser, Kari-Keen and Anthes flares—embody the same elements combined in substantially the same way as described and claimed in the patent and operate with substantially the same economy and efficiency to produce the same results as are produced by the "Economy" burner made under the patent by the owner thereof.

The Bolser, Kari-Keen and Anthes flares are similar in construction. All have been held to infringe, the Bolser and Kari-Keen by Judge Hahn in the Ohio cases and the Anthes by the Circuit Court of Appeals in the New York case. None of the four courts has questioned infringement, nor do we believe that it will be seriously questioned here. The infringing structures differ from plaintiff's Economy flares made under the patent in suit and from the patent drawing (except for matters of shape) only in that the guard in the infringing devices has been elevated a short distance above the fuel tank and the air inlet openings placed in the flange which supports the cap instead of in the sides of the cap.

A sectional view of the Bolser flare appears on page 319 and a similar view of the Kari-Keen flare on page 321 of the New York record. A similar view of the Anthes flare, with claims 2, 5, 11 and 12 of the patent applied thereto appears on page 297 of the New York record and corresponding views of the Bolser and Kari-Keen flares, with claims 2 and 11 applied are found at pages 161 and 162 of the Ohio record.

Claims 2, 5, 11 and 12 are applied to the drawing of the patent in suit at page 291 of the New York record.

The same arguments of non-infringement were urged

in both cases. Referring to defendants' contentions in the Ohio cases, Judge Hahn stated (Ohio R. 28, 29):

"If the patent in suit is valid, I think defendants' devices infringe all of the claims relied upon. Plaintiff's commercial device is represented by Exhibit 3-A and the drawing Exhibit 2-A. The Bolser torch is represented by Exhibit 3-B and the drawing Exhibit 2-B. The K-K torch is represented by Plaintiff's Exhibit 3-C and the drawing Exhibit 2-C. The main argument against infringement, as I gather it, is based upon the manner or method of disposing or mounting the cap upon the torch body. It is said the claims call for the mounting or disposing of the cap directly or immediately upon the torch body.

"Defendants' expert testified that Withrow's contribution to the art is his teaching that the cap be mounted or disposed directly or immediately upon the torch body as appears in the exhibits just referred to. I cannot agree with this interpretation of the patent. **I think that its main purpose and teaching is to protect the flame at its source and that this idea has been appropriated in defendants' devices.** There is authority, too, for saying that where location is one element in a combination, a fair construction of the language of the claims is obtainable only from a study of the entire patent. *Deister Concentrator Co. vs. Deister Machine Co.*, (C. C. A. 7) 263 Fed. 706, 709, 710. Such a study shows that the essence of the invention here is protection of the flame at the source, which is accomplished by defendants' devices also. In any event, Exhibit 3-B avoids the language of the claims only by almost imperceptible and immaterial differences. **To hold non-infringement on this ground would be clearly to sacrifice substance to form.** Plaintiff's Exhibit 3-C is said not to infringe because the cap is mounted not upon the torch body but upon an extension of the wick tube. It seems to me, however, it is just as fair to say that the wick tube in Exhibit 3-B is a part or extension of the torch body, within the meaning of

the claims (although the so-called wick tube is made as a separate part), and that the cap is disposed or mounted upon the torch body within the meaning of the claims fairly construed. (Emphasis ours.)

"It is said that if defendants' devices come within the language of the claims, they read directly on Almond No. 193,796, and hence that as to this claim the alleged infringing torches are within the prior art. But if the claims read on Almond, they do so as a matter of phraseology only and not as a matter of substance, and defendants do not escape infringement upon the ground urged. The differences between plaintiff's device and the accused devices are arguable differences only; the substance of plaintiff's invention has been appropriated, and the devices infringe all of the claims relied upon."

In finding infringement of claims 2, 5, 11 and 12 by the Anthes flare Judge Manton stated (N. Y. R. 453):

"But defendant says it avoids infringement because in its device the flange which supports the cap is elevated a short distance above the body of the torch and the air inlet openings are located in this supporting flange instead of in the side of the cap. No statement in the claims of specifications requires that the cap rest directly on the body of the torch, nor that the air inlet ports be located in the body of the cap. The patentees state that while they have shown and described the constructions 'which admirably fulfill the objects primarily enumerated, it is to be understood that the above description * * * is given by way of illustration and not of limitation.'

"Claim 2 calls for a 'flame guard for said wick mounted on the outside of the said torch body, said guard including * * * air ports.' In appellee's device the flame guard is mounted on the outside of the torch body. There is no doubt that the flame guard includes both the cap and its supporting flange and that the flame guard includes air ports.

"Claim 5 calls for 'a guard fitting over the outer end of the wick * * *, said guard having an imperforate top wall and side flame and air openings.' Considering the guard as including both cap and supporting flange, appellee's flare has air openings in the guard at the side of the wick,—an important consideration—rather than locating them in the side of the cap.

"The non-infringement of claim 11 is based on the claim that appellee has separated the wick-tube-supporting and heat-receiving portions of the flange of the patent. But this overlooks the rule that infringement cannot be avoided by substituting two parts for a single part of a patented structure when the two parts perform the same function as does the single part of the patent. *Arthur Colton Co. vs. McKesson & Robbins, Inc.*, 58 Fed. 157, 158; *Line Material Co. vs. Brady Electric Mfg. Co.*, 7 Fed. 2, 48, 50.

"As to claim 12, it is contended that the word 'lateral' applies to the location of the air openings and requires that they be in the cap. The air inlets in the supporting flange of the appellee's flare are located laterally with respect to the wick and wick tube, as are the air inlets of appellant's device.

"These arguments, as to non-infringement, fail to give effect to the established rules that infringement exists **if the substance of the invention which is defined by the claims, as distinguished from its form,** is appropriated, and that infringement of a combination claim is not avoided by reason of the fact that the appellee is free to use some or all of the separate elements of the combination because they existed in the prior art. *Smith vs. Snow*, 294 U. S. 1; *Winans vs. Denmead*, 56 U. S. 329; *Sanitary Refrigerator Co. vs. Winters*, 280 U. S. 30; *Hillard vs. Fisher Book Typewriter Co.*, 159 Fed. 439, 442." (Emphasis ours.)

It is believed, therefore, that infringement is clear.

## CONCLUSION

The patent in suit is for a wholly novel and exceptionally useful device. It was created as a result of intensive and extensive experimentation, induced by numerous complaints from users of prior devices intended for the same purpose. Its production was attended by commercial acceptance which was so extensive in character that it completely supplanted the prior flares or torches and rendered them obsolete. Others skilled in the art had tried to invent or create a device which could be as efficiently utilized—all without success. The interested art either acknowledged the patent and asked for and received licenses thereunder, or, like the defendants in these cases, openly copied and infringed. The decision of the Second Circuit Court of Appeals that under these circumstances the patent was validly granted for an invention was correct, and the decision of the Sixth Circuit Court of Appeals was in error.

Therefore, the decision of the Second Circuit Court of Appeals should be affirmed, and that of the Sixth Circuit Court of Appeals should be reversed.

Respectfully submitted,

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Three-Wick Detroit Torch
With Umbrella